

What is claimed is:

1 1. A photomask comprising:
2 a shifter; and
3 a trim mask for blocking transmission of a particular light passing
4 through the shifter from reaching a wafer, the trim mask including a first part
5 having a chrome mask and a second part having a phase shift mask.

1 2. A photomask as claimed in claim 1, wherein the first part
2 corresponds to a region on which a gate pattern including a gate of a chip
3 and a predetermined portion of a field poly extending from the gate will be
4 placed, and the second part corresponds to a region on which a field poly
5 pattern comprised of the field poly, but not the first part, will be placed.

1 3. A photomask as claimed in claim 1, wherein boundaries
2 between the first and second parts at two opposite sides of the trim mask are
3 aligned with two opposite edges of an imaginary layer, which corresponds to
4 two opposite sides of the trim mask and is introduced when designing the
5 trim mask.

1 4. A photomask as claimed in claim 2, wherein boundaries
2 between the first and second parts at two opposite sides of the trim mask are
3 aligned with two opposite edges of an imaginary layer, which corresponds to

two opposite sides of the trim mask and is introduced when designing the trim mask.

5. A photomask as claimed in claim 1, wherein boundaries between the first and second parts at one of two opposite sides of the trim mask are a predetermined distance away from one of two opposite edges of an imaginary layer, which corresponds to the two opposite sides of the trim mask and is introduced when designing the trim mask.

6. A photomask as claimed in claim 2, wherein boundaries between the first and second parts at one of two opposite sides of the trim mask are a predetermined distance away from one of two opposite edges of an imaginary layer, which corresponds to the two opposite sides of the trim mask and is introduced when designing the trim mask.

7. A photomask as claimed in claim 6, wherein the predetermined distance is no greater than the wavelength of light illuminated on the photomask.

8. A photomask as claimed in claim 6, wherein the predetermined distance is about 2480 Å.

1 9. A photomask as claimed in claim 1, wherein the other opposite
2 edges of the trim mask are placed within corresponding edges of the
3 imaginary layer.

1 10. A method for manufacturing a photomask comprising:
2 preparing a shifter; and
3 forming a trim mask for blocking transmission of a particular light
4 passing through the shifter from reaching a wafer, the trim mask having a
5 first part including a chrome mask and a second part including a phase shift
6 mask.

1 11. The method as claimed in claim 10, wherein the first part
2 corresponds to a region on which a gate pattern including a gate of a chip
3 and a predetermined portion of a field poly extending from the gate will be
4 placed, and the second part corresponds to a region on which a field poly
5 pattern comprised of the field poly, but not the first part, will be placed.

1 12. A method as claimed in claim 11, wherein forming the trim
2 mask comprises:

3 preparing a substrate;
4 sequentially forming a shift material layer and a chrome layer having
5 the same size on the substrate; and
6 forming a chrome layer pattern having a size smaller than the shift
7 material layer by patterning the chrome layer.

1 13. A method as claimed in claim 12, wherein forming the chrome
2 layer pattern comprises:
3 forming a mask having a length smaller than the chrome layer on the
4 shift material layer; and
5 removing the chrome layer exposed by the mask.

1 14. A method as claimed in claim 13, wherein the shift material
2 layer is formed of MoSi.

1 15. A method as claimed in claim 13, wherein the mask is formed
2 of photoresist.

1 16. A method as claimed in claim 12, wherein the substrate is
2 formed of quartz.

1 17. A method as claimed in claim 11, wherein forming the trim
2 mask comprises:
3 sequentially forming a shift material layer and a chrome layer having a
4 size smaller than the shift material layer on a substrate; and
5 patterning the shift material layer to form a patterned shift material
6 layer that is larger than the chrome layer.

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